

**Facilitator Notes**

Sway – Unravelling Unconscious Bias

*Introduction to Chapter 4*

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Is Publishing in the Chemical Sciences Gender  
Biased?

*A report by Royal Society of Chemistry*



**DISCUSSION BOOKLET 1 – CRIB SHEET**

*“To know the true reality of yourself, you must be aware not only of your conscious thoughts, but also of your unconscious prejudices, bias and habits.”*

*Unknown*

## **Icebreaker – “Talk Show”**

*For this task think about the one person you would want to interview if you had your own talk show and why. You will need to explain your choice to the group.*

The aim of the icebreaker is to get people comfortable talking to one another and expressing their own opinions. This should help set the tone of the session and help to engage everyone in the conversation.

## **Thinking back - What challenged/surprised you from the chapters?**

*This could be something pertinent or something that really grabbed your attention and made you think twice.*

This is an open question that we will likely use in some form in all the sessions. It is a good opportunity to gauge the feelings and understanding of the group.

*This session we will consider what unconscious bias is and how it differs from conscious bias. We will then consider how unconscious biases form, why we use them and their historical basis, before exploring stereotype activation versus application, and whether scientists are biased.*

## Discussion

**What is unconscious/implicit bias, how is it different from conscious or explicit bias?** *Re-read pages 16-17*

Agarwal describes both types of bias on pages 16 and 17 as;  
Implicit/unconscious bias – biases that exist without our conscious knowledge, the ones that manifest themselves in our actions and reactions often without us realising it. They are not deliberate or controlled.  
Explicit/conscious bias – attitudes or beliefs held consciously, such as hate speech

A piece of work run by Harvard University explores implicit bias and offers a test to learn about your own implicit biases - (<https://implicit.harvard.edu/implicit/takeatest.html>)

**What is “satisficing” and when do people do it?**

*How does it link to bias and conformation bias? Re-read pages 30-36*

Satisficing is described by Agarwal as finding a “satisfactory” solution in a limited time scale. It is based on cognitive shortcuts, used to decide on and pursue a course of action that will satisfy the minimum requirements necessary to achieve a particular goal (heuristic). It is not necessarily optimal, perfect, or rational, but it is rapid.

When we make rapid decisions, these are often based on our biases and can be informed by conformation biases – the tendency to interpret, favour or recall information we agree with or fits fits/conforms with the beliefs of those around us (“the desire to fit in” or “herd mentality”).

## Where do our cognitive biases come from?

*What are in-groups and out-groups? Re-read pages 43-48, 61-66, 73-75 and 93*

Agarwal explains that cognitive biases are formed due to the interaction of our cognitive processes with the environment around us. Unconscious biases could therefore be considered adaptive mechanism, formed by evolution.

These mechanisms favour the "in-group," the culturally alike, and disfavour the out-group, the "unlike" or the "other". From an evolutionary perspective these mechanisms allow for the rapid distinguishing of perceived friend from foe.

It is notable that greater peer-diversity at a young age is linked to decreased views of seeing out-groups as threats.

This leads into the next question.

## **Reflecting**

**Should these cognitive biases still matter today?** *Re-read pages 65-66*

No, this is not an excuse for racism or sexism etc as Agarwal explains. As outlined, this was a friend or foe response, however our cognitive processes and the world around us have now outgrown these beliefs. We are no longer facing similar threats in our day to day lives where cognitive biases provided a survival advantage.

## What is the difference between stereotype activation and application?

*How does stereotyping affect multiple identity/intersectional groups? Re-read pages 107-119*

Stereotype activation is an increased access to knowledge about social groups while stereotype application is the use of this knowledge in the perception and judgement of others. Stereotype activation is the unconscious activation of information based on what has been learned. Stereotype application requires activation but is a choice made by the person, to actively apply the stereotype to the situation.

Stereotypes can affect intersectional groups aka multiple identity groups in a variety of ways depending on how the person is perceived i.e. for Brent Staples his status as an upper-class man outweighed the fact that he was black. However, someone's perceived characteristics can negatively reinforce one another and lead to invisibility or greater discrimination, for example black women and the gender pay gap.

## Are positive stereotypes harmful?

*Re-read pages 129-133*

Positive stereotypes still categorise people based on superficial characteristics and justify/cement inter-group inequalities. They can also lead to negative outcomes for example women being considered nurturing can lead to negative outcomes in employment, put additional pressure on a person within a perceived group and undermine the achievement of people in a group. They may also be seen as a trade off i.e. you can't be athletic and intelligent.

## **Application**

### ***Are Scientists biased or objective?***

Re-read pages 133-136 and "The scientist is not a rational animal" by M.Breyl<sup>1</sup>

There is a perception that scientists are objective as this is "what the job" entails, however no one is free from bias. Scientists are still human and carry social, political etc bias that have been built up over many years due to a person's background. As scientists (and as human beings) we should try to determine what our biases are and work to address them in all stages of our work from grant writing to reviewing to teaching.

### ***Additional Notes;***

### **References;**

- (1) Breyl, M. The Scientist Is Not a Rational Animal: Biases in Networking, Theory and Interdisciplinarity. *Acad. Lett.* **2021**.